## U.S. Geological Survey and U.S. Fish and Wildlife Service Receive 2008 Federal Energy and Water Management Awards

The U.S. Geological Survey's Woods Hole Science Center and the U.S. Fish and Wildlife Service's Ottawa and San Andres National Wildlife Refuges were honored as recipients of the Federal Energy and Water Management Awards during an October 22, 2008, ceremony in Washington, D.C. These awards are sponsored by the Department of Energy's Federal Energy Management Program, and recognize outstanding Federal achievement of energy savings, sustainable building development, and implementation of renewable energy resources.

The USGS' Woods Hole Science Center recently completed a 4,000-square foot laboratory addition designed and constructed using sustainable design principles and technologies including a vegetated roof, native landscaping, a rain garden, use of low-emitting and non-toxic materials, natural ventilation and lighting, and an increased connection with outdoor surroundings. The sustainable facility, completed in December 2007, increased the size of the existing structure by 44 percent and achieved a 61 percent energy savings through the use of active and passive solar technologies, natural ventilation and lighting strategies, increased insulating standards, and optimized use of automated controls.



**USGS' Woods Hole Science Center** 

The new Visitor Center at the USFWS' Ottawa National Wildlife Refuge is a remarkable sustainable, high-performance building showcase. The 'whole-building' design approach

resulted in outstanding achievements that included use of recycled materials, efficient use of energy, water conservation and runoff treatment. Features which resulted in substantial energy savings included the installation of a 30-ton pond-loop geothermal heat pump system, an air-to-air heat exchanger, in-floor radiant tube heating; instantaneous electric hot water heaters, "super insulation," a computerized Energy Management System and associated controls, occupancy and daylight sensors, energy-efficient lighting, low-emitting windows and tinted window glazing.



## USFWS' Ottawa National Wildlife Refuge

The USFWS used a multi-year tiered approach to install on-site renewable energy systems at the San Andres National Wildlife Refuge. The Refuge is now able to supply 100 percent of its own power for several months of the year and has decreased energy intensity by 80 percent from the FY 2003 baseline. In 2006, the Refuge installed 1,800 watts of grid-tied solar photovoltaic (PV) panels and PV lighting in the parking areas. In 2007, the Refuge boosted the output of the grid-tied solar PV panels by 2,400 watts and installed a 1,800-watt grid-tied wind generator, making the total output of the hybrid solar PV/wind energy system 6,000 watts. The successful tiered approach to installation of on-site renewable energy systems is a model for the Department of the Interior's many remote facilities.



USFWS' San Andreas National Wildlife Refuge